

**DIRECT WAVEFRONT-BASED CORNEAL
ABLATION TREATMENT PROGRAM**

ABSTRACT OF THE DISCLOSURE

5 A method for measuring an optical system comprises transmitting an image
with the optical system. Gradients of the optical system can be determined by separating the
transmitted image with a lenslet array. An error-correcting change in the shape of the optical
system can be mapped by integrating across the gradients. The change in elevation around the
path is related to the accuracy of the gradient array. A system for measuring a wavefront of
10 an eye includes an image source for projecting an image into the eye, lenslets, a detector for
measuring angles of light rays of an optical surface of an eye, and a computer for mapping
the errors of the eye. A tomographic wavefront map is made by deflecting the measurement
path of the wavefront sensor. Aberrations are selected for treatment in response to an order
of the aberration and a tissue structure corresponding to the aberration.

15 PA 3181180 v1